Spectrometric Analysis of Nitrogen in Steel with D.C. Arc in the Vacuum Ultraviolet

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Abstract

A spectrometric determination of nitrogen in steel was performed with d.c. arc excitation in the vacuum ultraviolet region. Two nitrogen spectral lines, 1,742 Å and 1,745 Å, were utilized for the determination of nitrogen using CI 1,930 Å as internal standard in the wave-length region of 1,200–2,000 Å. In argon atmosphere (700 mm Hg, 28 A arc current) and in helium atmosphere (700 mm Hg, 30 A arc current) nitrogen could be determined belew 50 ppm after a pre-arcing time of 100 sec. Better reproducibility could be obtained with the line 1,745 Å rather than with 1,742 Å.

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